



# HEXAGON TRANSPORTATION CONSULTANTS, INC.

## MEMORANDUM

TO: Demetri Loukas

FROM: Robert Del Rio

DATE: March 27, 2008

SUBJECT: Results of Parking Demand Surveys for Senior Housing Developments

This memorandum summarizes findings of parking demand analysis conducted for senior housing developments in the Bay Area. Hexagon Transportation Consultants has recently completed several parking occupancy surveys throughout the Bay Area. The purpose of the parking occupancy surveys is to formulate a recommendation on the number of parking spaces that would be required to accommodate parking demands for senior housing developments. Our findings are summarized below.

### Parking Surveys

Five senior housing developments have been surveyed in San Jose, Pleasanton, and San Mateo. The Parking Generation Manual published by the Institute of Transportation Engineers (ITE) is the most widely used data source for empirically derived parking data associated with the most common land use types. However, very limited parking data are published for senior apartment developments. The surveyed parking supply and demand for each of the facilities is presented in Table 2.

**Table 2**  
**Parking Demand and Supply at Senior Apartments in Bay Area**

Facility	City	Minimum Age	Units offered at:	Number of Units	Parking Supply	Parking Demand	Parking Supply Rate	Parking Demand Rate
Site A <sup>1</sup>	Huntington Beach	n/a	n/a	46	55	23	1.20	0.50
Site B <sup>1</sup>	Huntington Beach	n/a	n/a	91	127	30	1.40	0.33
Stratford	San Mateo	65+	Market Rate	67	96	63	1.43	0.94
Peninsula Regent	San Mateo	65+	Market Rate	207	240	177	1.16	0.86
The Gardens	Pleasanton	62+	50% Market Rate 50% Affordable	172	125	123	0.73	0.72
Craig Gardens	San Jose	55+	Affordable	90	64	47	0.71	0.52
Le Mirador	San Jose	55+	Market Rate	140	98	73	0.70	0.52
<b>Totals</b>				<b>813</b>	<b>806</b>	<b>536</b>	<b>0.99</b>	<b>0.66</b>
<b>Totals Local Data (San Mateo, Pleasanton and San Jose)</b>				<b>676</b>	<b>623</b>	<b>483</b>	<b>0.92</b>	<b>0.71</b>

<sup>1</sup> ITE Parking Generation Manual, 3rd Edition - Land Use 252

Table 2 shows that the actual parking demand at all but one of the surveyed facilities is significantly lower than the parking supply. Only at The Gardens in Pleasanton is the parking demand close to the supply. The



survey data showed higher parking rates at the two senior housing developments in the City of San Mateo where the units are offered at market rates and are occupied by more affluent residents that typically have higher auto ownership levels. The parking demand rates at the two San Jose developments (Le Mirador and Craig Gardens) are identical, 0.52 occupied spaces per unit. The parking demand rate of the surveyed housing developments varies greatly, from 0.94 to 0.33 spaces per unit. The average parking supply is just under one space per unit and the average parking demand is 0.66 spaces per unit, or two thirds of the supply. Based on the local data, the average supply and demand rates are 0.92 and 0.71 spaces per unit, respectively.

### **Recommended Parking Spaces**

The survey data suggests that senior housing developments, which consist of units that are offered at market rate, have a higher parking demand compared to those with affordable units. Other surveys have shown a strong correlation between household income and auto-ownership. The auto-ownership of residents with higher incomes is statistically higher compared to residents with low-income levels. Therefore, affordable senior housing developments, which are intended for residents with low or moderate income levels, require fewer parking spaces compared to market rate developments.

It is our recommendation to use a rate of 0.60 spaces per unit as the basis to calculate the number of parking spaces for affordable senior apartment development. However, the number of parking spaces to be provided needs to exceed the estimated peak demand. A peak-demand factor should be applied to account for the daily variation in parking demand. It is recommended to increase the average surveyed rate of 0.60 spaces per unit by ten percent to provide for daily fluctuations in parking demand. Therefore, it is recommended to use a parking rate of 0.66 spaces per unit for affordable senior housing developments. This estimate is conservative since it is higher than the observed rate at the affordable Craig Gardens complex and is only slightly lower than rate at The Gardens in Pleasanton where 50% of the units are offered at market rates.